

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) [[A]] An electronic device implemented method for generating a code generation report from a simulatable block diagram model comprising a plurality of graphical elements, the simulatable block diagram model provided in a modeling environment, the method comprising:

creating a source model representation of the block diagram model in a first language;

generating source code in a second language from the source model representation a simulatable block diagram model using a code compiler, the second language being distinct from the first language, the simulatable block diagram model represented in a source model language, wherein;

_____ the generated source code includes one or more comments in the second language,

_____ the one or more comments identifying a corresponding element in the block diagram, and

_____ the one or more comments that include a block path identifying a section of the source model language source model representation represented in the first language that corresponds to the an element in the block diagram model;

generating a code generation report from the generated source code using a report compiler, the generating of the code generation report comprising:

parsing, using the report compiler, the one or more comments in the generated source code to identify the block path, and

_____ identifying, using the report compiler, the block path in the one or more comments, and

converting, using the report compiler, the generated source code into the code generation report by replacing the block path with a hypertext link hyperlink, where the hyperlink:

that refers to the element of the block diagram model that corresponds to the section of the source model language representation identified by the block path,

the hypertext link providing a hyperlink provides a link from the code generation report to the element in the block diagram model, and

the hyperlink comprising includes a command that is executable in the modeling

environment, the command relating to the element in the block diagram model; and displaying the code generation report to a user.

2. (Currently Amended) The method of claim 1 further comprising:

receiving input from a user representing a selection of the at least one ~~hypertext link~~hyperlink; and

displaying to the user at least a portion of the block diagram model including the element of the model associated with the ~~hypertext link~~hyperlink.

3. (Original) The method of claim 2, wherein displaying to the user at least a portion of the block diagram model comprises displaying the associated element in a highlighted fashion.

4. (Canceled).

5. (Currently Amended) The method of claim 1, wherein the parsing replaces a variable reference in the generated code with a ~~hypertext link~~hyperlink to an associated element in the block diagram model.

6. (Currently Amended) The method of claim 1 wherein the ~~hypertext link~~hyperlink is Standard Generalized Markup Language (SGML).

7. (Currently Amended) The method of claim 1 wherein the ~~hypertext link~~hyperlink is Hypertext Markup Language (HTML).

8. (Currently Amended) The method of claim 5 wherein the ~~hypertext link~~hyperlink is Extensible Markup Language (XML).

9. (Previously Presented) The method of claim 1 wherein the at least one comment listing a reference to a block comprises a character string identifying a path to a file providing information relating to a section of the block.

10. (Currently Amended) A system for generating a code generation report from a

simulatable block diagram model comprising a plurality of graphical elements, the simulatable block diagram model provided in a modeling environment, the system comprising:

means for creating a source model representation of the block diagram model in a first language;

means for generating source code in a second language from a simulatable block diagram model represented in a source model language the source model representation, the second language being distinct from the first language, wherein the generated source code includes at least one comment in the second language that includes a block path, the block path identifying a section of the source model language source model representation represented in the first language that corresponds to a block in the block diagram model;

means for generating a code generation report from the generated source code, the generating of the code generation report parsing the at least one comment in the generated source code to identify the block path in the at least one comment and replacing at least a portion of the at least one comment with at least one hypertext link hyperlink that refers to an element of the block diagram model that corresponds to the section of the source model language representation identified by the block path, the hypertext link providing a hyperlink linking from the code generation report to the element of the block diagram model, the hyperlink comprising a command that is executable in the modeling environment, the command relating to the element in the block diagram model; and

an output device for displaying the code generation report to a user.

11. (Currently Amended) The system of claim 10 further comprising:

means for receiving input from a user representing a selection of the hypertext link hyperlink; and

means for displaying to the user at least a portion of the block diagram model including the element of the model associated with the hypertext link hyperlink.

12. (Previously Presented) The system of claim 11, wherein the means for displaying to the user at least a portion of the block diagram model comprises displaying the associated element in a highlighted fashion.

13. (Canceled)

14. (Currently Amended) The system of claim 10, wherein the parsing replaces a variable reference in the generated code with a ~~hypertext link~~ hyperlink to an associated element in the block diagram model .

15. (Currently Amended) The system of claim 10 wherein the ~~hypertext link~~ hyperlink is Standard Generalized Markup Language (SGML).

16. (Currently Amended) The system of claim 10 wherein the ~~hypertext link~~ hyperlink is Hypertext Markup Language (HTML).

17. (Currently Amended) The system of claim 16 wherein the ~~hypertext link~~ hyperlink is Extensible Markup Language (XML).

18. (Previously Presented) The system of claim 10 wherein the at least one comment listing a reference to a block comprises a character string identifying a path to a file providing information relating to a section of the block.

19. (Currently Amended) A computer program product residing on a computer readable medium having instructions stored thereon for generating a code generation report from a simulatable block diagram model comprising a plurality of graphical elements, the simulatable block diagram model provided in a modeling environment, the instructions when executed by one or more processors cause the one or more processors to: which, when executed by a processor, cause the processor to:

create a source model representation of the block diagram model in a first language;
generate source code in a second language from the a simulatable block diagram model represented in a source model languagesource model representation, the second language being distinct from the first language, the generated source code including at least one comment in the second language that includes a block path, the block path identifying a section of the source model language source model representation represented in the first language that corresponds to a block in the block diagram model;

generate a code generation report from the generated source code, the generating of the code generation report parsing the at least one comment in the generated source code to identify the block path ~~in the at least one comment and converting the generated source code into the code generation report by replacing~~ at least a portion of the at least one comment with at least one ~~hypertext link~~hyperlink that refers to an element of the block diagram model corresponding to the section of the ~~source model language~~source model representation identified by the block path, the ~~hypertext link providing a hyperlink linking~~ hyperlink comprising a command that is executable in the modeling environment, the command relating to the element in the block diagram model; and

display the code generation report to a user.

20. (Original) The computer program product of claim 19 wherein the computer readable medium is a random access memory (RAM).

21. (Original) The computer program product of claim 19 wherein the computer readable medium is read only memory (ROM).

22. (Original) The computer program product of claim 19 wherein the computer readable medium is hard disk drive.

23. (Currently Amended) A computing system for generating a code generation report from a simulatable block diagram model comprising a plurality of graphical elements, the simulatable block diagram model provided in a modeling environment, the system comprising:

a processor and

a memory,

wherein the processor and memory are configured to:

create a source model representation of the block diagram model in a first language;

generate source code in a second language from the a simulatable block diagram model represented in a source model languagesource model

representation, the second language being distinct from the first language, the generated source code including at least one comment in the second language including a block path that identifies a section of the ~~source model language~~ source model representation represented in the first language that corresponds to a block in the block diagram model;

generate a code generation report from the generated source code, the generating of the code generation report parsing the at least one comment in the generated source code to identify the block path ~~in the at least one comment and converting the generated source code into the code generation report by replacing at least a portion of the at least one comment with at least one hypertext link~~ hyperlink that refers to an element of the block diagram model corresponding to the section of the ~~source model language~~ source model representation identified by the block path, the ~~hypertext link providing a hyperlink linking~~ hyperlink comprising a command that is executable in the modeling environment, the command relating to the element in the block diagram model; and

display the code generation report to a user.

24. (Previously presented) The system of claim 23 wherein the processor and the memory are incorporated into a personal computer.

25. (Previously presented) The system of claim 23 wherein the processor and the memory are incorporated into a network server capable of Internet communication.

26. (Previously presented) The system of claim 23 wherein the processor and the memory are incorporated into a single board computer.

27. (Currently Amended) [[A]] An electronic device implemented method for generating a document having information about source code associated with a graphical model, the graphical model provided in a modeling environment, and providing a hyperlink referencing an element of the graphical model in the document, the method comprising the steps of:
creating a source model representation of the graphical model in a first language;

providing source code identifying an element of the graphical model, the source code provided in a second language that is distinct from the first language, wherein the graphical model is a simulatable graphical model represented ~~in source model language~~, the source code including at least one comment in the second language including a block path that identifies a section of the source model ~~language representation represented in the first language~~, the block path that corresponds ~~corresponding~~ to a block in the graphical model;

generating a document from the source code, the generating of the document parsing the at least one comment in the generated source code to identify the block path ~~in the at least one comment~~ and ~~converting the generated source code into the document by replacing at least a portion of the at least one comment with at least one hypertext link~~ hyperlink that refers to an element of the graphical model corresponding to the section of the source model ~~language representation~~ identified by the block path, the at least one ~~hypertext link~~ hyperlink ~~providing a hyperlink linking~~ from the document to the element of the graphical model, the hyperlink comprising a command that is executable in the modeling environment, the command relating to the element in the graphical model; and

displaying the document to a user.

28. (Previously Presented) The method of claim 27 further comprising:

selecting the hyperlink to display or identify the referenced element in the graphical model.

29. (Previously Presented) The method of claim 27 further comprising:

providing the hyperlink at a location in the document having information about a portion of source code identifying the element of the graphical model.

30-35. (Canceled)